

ABSTRACT OF THE DISCLOSURE

A motor stator core for achieving improved magnetizing feature in lower magnetic fields and reduced iron loss, and improving motor power. The stator core fabricated out of non-oriented electrical steel sheets is annealed by applying a magnetic field to the heated stator core at least in the temperature range from a temperature immediately above a Curie point thereof to 300°C in the process of cooling the stator core. The magnetic field has the same direction as the direction of excitation of a stator in the motor when used to drive a motor. This increases the magnetic induction in lower magnetic fields in particular and reduces the hysteresis loss, with a reduction in the total iron loss of the stator. A motor using this stator core increases in saturation induction under exciting currents of higher frequencies, allowing enhanced motor power.